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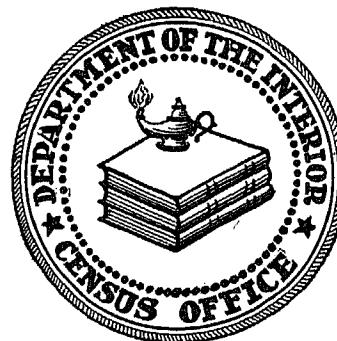
WILLIAM R. MERRIAM, DIRECTOR

MANUFACTURES

PART IV

SPECIAL REPORTS ON SELECTED INDUSTRIES  
(CONTINUED)

PREPARED UNDER THE SUPERVISION OF S. N. D. NORTH,  
CHIEF STATISTICIAN FOR MANUFACTURES



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## LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,  
CENSUS OFFICE, WASHINGTON, D. C.,  
*June 15, 1902.*

SIR:

I have the honor to transmit herewith Part IV of the Report on Manufactures, Twelfth Census. This volume is a continuation of Part III, and contains the remainder of the special reports upon selected industries prepared by the expert special agents employed for that purpose by the division of manufactures, and by members of the clerical force of the division. The reports in this volume begin with those upon iron and steel, and include all the special reports which have one or another of the metals as their chief raw material, as follows: Iron and steel; tin and terne plate; lead, copper, and zinc, smelting and refining; electrical apparatus and supplies; shipbuilding; locomotives; cars, steam railroad; carriages and wagons; bicycles and tricycles; agricultural implements; metal-working machinery; motive-power appliances; sewing machines; needles and pins; typewriters; musical instruments and materials; watches and watch cases; and pens and pencils. It also contains the reports upon the manufacture of chemicals, petroleum, coke, and manufactured gas. The volume concludes with the reports upon the utilization of wastes and by-products in manufactures, and upon patents in their relation to manufactures.

This final volume of the Report on Manufactures completes my work as chief statistician in charge of this branch of inquiry at the Twelfth Census. I embrace this opportunity to express my profound appreciation of the uniform courtesy, the constant encouragement, the practical advice, and the unfailing cooperation extended by you from the commencement to the completion of a great and perplexing work. Every facility asked has been promptly afforded, and thus it has been possible to complete the work within the time limit set by Congress.

Very respectfully,



*Chief Statistician for Manufactures.*

Hon. WILLIAM R. MERRIAM,  
*Director of the Census.*